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ABSTRACT

The paper presents case studies showing results of an interdisciplinary (I-Team) approach to behavior problems of five retarded residents of a group home. Stressed are the concepts of preparedness and prevention to individual case analysis and active treatment approaches. Individual case studies describe the I-Team's approach with such behaviors as self-injurious behavior, tantrums, and unacceptable behavior. A summary review of the five cases presents findings including that, although the influence of social learning appeared to be a variable in some cases, in others the apparent social learning variable was stimulated by a medical condition as well as psychological dependence on treatment. (MC)

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PREPAREDNESS AND PREVENTION INTO TREATMENT PROGRAMS:

WHERE TO BEGIN

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PREPAREDNESS AND PREVENTION INTO TREATMENT PROGRAMS: WHERE TO BEGIN

Introduction

Two basic philosophical grounds converge with respect to the analysis and treatment of human behavior deficits and disorders. These basic grounds precipitate the following general position descriptions:

1. A human being interacts with his/her environment from the moment of conception to the moment of death. Each interaction provides an impact which will continuously effect the individual throughout the life span, establishing or re-establishing patterns of behavior, biological development or both. Due to individual characteristics, treatment, measurement and quantification is, to some degree, probable, impossible or limited.
2. A human being interacts with his/her environment from the moment of conception to the moment of death. Each interaction provides an impact which may be temporary, permanent, long-lasting, situational, or catalytic. The impacts can be measured as precisely or systematically as the current scientific method allows, within the scope of each individual. Each interaction may effect the biological and/or behavioral patterns of the individual and be altered within those limits imposed by the current state of technology.

The concept of propensity influencing ability or intelligence is not germane to these positions but compatible with both as environmental influence is an established law in the scientific community.

From these two positions have evolved the various disciplines in the field of medicine and psychology, as well as the current issues in analysis and treatment which practitioners must overcome so that the interdisciplinary (I-Team) process can provide treatment programs designed in the client's best interest.

The I-Team process appears to be an effective catalyst for stimulating a cooperative effort among various philosophies and generating productive outcomes with respect to the client's best interest. (Crosby, 1976) Although the position stated appears idealistic, the I-Team can be non-effective for various reasons, with the most outstanding being (1) lack of adequate behavior analysis; (2) lack of adequate perspective; (3) lack of budgeting and environmental supports, as well as (4) philosophical, partisan and personal perspective or belief, and (5) prediction of occurrences and episodes. Ultimately, many of the professional conflicts arise from the philosophical grounds previously stated. Antonelli and others, 1982, and Crosby, 1976.

In order to avoid repeating errors, the goal of a developing preparedness and prevention program within active treatment approaches must consider the errors and successes of previous attempts. The present paper will outline an approach to preventative programming without burdening the reader with historical perspective and philosophical discourse.

The concept of preparedness and prevention can only be realized on a case by case, individual basis. The concept is grounded in the I-Team's ability to complete a thorough analysis of the situations and factors which relate to the individual case. Active analysis can generate procedures which relate to specific persons. The procedures may include:

1. Improving staff awareness with respect to those medical and environmental conditions which tend to precede the emergence of maladaptive behavior and maintain maladaptive behavior.
2. Emphasis on observing clients and studying them during those periods of (1) decreased or absence of maladaptive behavior, and (2) acquisition of adaptive skills. Essentially, study why the client is doing well in terms of his medical and environmental state.

3. Informing staff of what medical or environmental conditions should be initially evaluated when clients demonstrate (1) regression or non-compliance in adaptive skills, or (2) escalations or emergence of maladaptive behavior.
4. Systematically applying procedural changes. If a medical factor is being evaluated, hold programmatic variables constant. The process of systematic application will provide the basis for medical or programmatic interventions which may constitute components of "preparedness and prevention approaches".
5. Global Behavioral Assessments which monitor (1) overall trends and variance in acquisition and performance of adaptive behavior, and (2) correlations with maladaptive behavior and environmental and/or medical factors.
6. The behavior analysis component must be on-going so that medical and programmatic interventions are validated as well as updated with current information.

One factor which increases the complexity of the preparedness/prevention concept is prediction. A recent National Institute of Mental Health report found that predictions of aggression were wrong 95% of the time, as contrasted with clinicians who held that their ability to predict aggression was correct 40 to 46% of the time.

The preparedness/prevention concept must assume that human behavior will continue, and what is initially required is a current and on-going analysis to determine the probability of behavioral episodes with respect to environmental/medical conditions. Once a response is reliably correlated with a set of circumstances, then the issue of preparedness and/or prevention may be addressed.

1. Preparedness essentially addresses the need for adequate resources, training, and materials to diminish, decrease, or improve behavior.

2. Prevention addresses the ideal of eliminating the occurrence of a behavior and may include preventing or not allowing certain intensities or episodes of behavior, such as aggression and regression.

This author holds that the current emphasis must concentrate on analysis and establishing methods of preparedness. Prevention as a method may follow as individualized preparedness procedures are established and reliability validated.

The concept of prevention is easily demonstrated in the fields of medicine and safety where the outcomes of disease and/or possibility of accident are more easily correlated and validly established. Applying the concept of prevention to human behavior essentially remains experimental question with respect to individuals under the care of mental health and correctional programs.

The information generated by the scientific community with respect to human behavior and personality suggests that the second philosophical ground is valid in that, in the past, the theoretical limits placed on human behavior and development have been found unreliable and not valid as new and alternative systems of observation and education or therapy are discovered and applied, e.g., biofeedback, human learning literature.

SUBJECT AND SETTING:

The clients represented currently live in a group home where the residential population is ten persons. The clients function within the adaptive and intellectual level of moderate to mild mental retardation as measured by conventional intellectual and adaptive assessment instruments.

MALADAPTIVE BEHAVIORS:

The case studies reviewed involve clients who engage in the following maladaptive behaviors:

1. Aggression directed at other persons, and/or property.

2. Self-injurious behavior, e.g., aggression directed at self.
3. Tantrums - screaming, crying associated with 1 and/or 2.
4. Unacceptable verbal behavior.

PROCEDURES AND DEFINITIONS:

1. Quiet Time - following a maladaptive behavior, the client is told to go to his room or asked to sit in a chair and relax for approximately five minutes. After a five minute absence of maladaptive behavior, the client is invited to participate in on-going activities.

2. Environmental stimulation - the informal interactions between the client and (1) persons he lives with, (2) persons who work at the group home, and (3) the community setting in which he lives.

3. Formal programming - refers to specific individualized training routines in which clients participate. These routines include structured behavior modification programs, as well as skill (habilitation or rehabilitation) training programs. These programs are designed to increase adaptive behavior as well as to decrease maladaptive behavior.

4. Baseline Observations - that period of time during which the client is observed prior to implementing treatment or therapy, or changing on-going treatment or therapy. In addition to a current behavior analysis, this period of observation would provide information as to how often maladaptive behaviors are observed. For example, a baseline study might demonstrate that 26 responses of aggression were observed in one month.

5. Treatment or therapy - the medical procedures and psychological procedures which interface to form any formal program.

SUBJECT CASE DESCRIPTIONS:

Subject 1 is an adult female who functions in the moderate range of intelligence and the mild range of adaptive behavior. Over the past two and one half years, the I-Team has completed a preparedness procedure which

involves evaluating medical conditions which result in irritability or pain when maladaptive behaviors are observed. A prevention component of this program involves the on-going monitoring of medical conditions so that the irritability and/or pain can be minimized or avoided whenever possible.

Approximately 2.5 years ago, the client was admitted to a hospital for "thought disorder and bizarre behavior". As a result of this in-patient treatment, the "schizophrenic" label was rediagnosed as a possible toxic reaction to gold treatment for suspected Rheumatoid Arthritis. Following the hospitalization, treatment with Haldol and Artane, antipsychotic drugs, continued. Behavioral observations indicated that, for a 6 month period, seven episodes of property destruction and unacceptable screaming or yelling were observed. The I-Team suggested that the need for antipsychotic medications be reviewed and, during the seventh month, Haldol and Artane were discontinued and replaced with Mellaril, 25 mg./day. During the following 5 month period, only seven episodes of maladaptive behavior were observed and the I-Team recommended a second psychiatric opinion regarding the need for Mellaril. Following the second opinion, the Mellaril was discontinued and, in the following months, staff reported an "improvement in social interaction skill and in alertness". An annual follow-up, which occurred one year later, indicated that the client presented no maladaptive behaviors as a presenting problem.

Summary:

This case presents an example of how the I-Team process was successful in making staff aware of other medical and environmental factors which could stimulate behavior that "appeared to be psychosis." The I-Team also, in providing individualized treatment, had to question the validity of the psychotic label as well as the need for antipsychotic medication, and avoided the implementation of formal behavior modification programs. A current review indicates that the client continues to improve and function adequately in her current

placement with no maladaptive presenting problems. She has been medication free for 16 months to date.

Subject 2 is a female who functions in the mild range of adaptive and intellectual functioning. Her case study presented the I-Team with a complex individual treatment issue due to medical conditions, including hypoglycemia, diet, illness, infection, menstrual conditions, as well as manipulative behaviors characteristic of obtaining food in an unacceptable manner. The client is an example of a person who did not have a treatment history involving anti-psychotic medication so the I-Team was able to analyze her behavior and medical conditions without the medication co-variable which typically is an issue. The maladaptive behaviors observed over the past 2.5 years included (1) aggression directed at others, property and self, and (2) unacceptable swearing and yelling. The treatment program includes Quiet Time following unacceptable behavior and a daily star chart token system to motivate acceptable behavior. The treatment program is currently similar to the school program with respect to monitoring medical conditions, dietary issues and motivational programs.

From January, 1980, over a 5 month period, the intensity of maladaptive outbursts ranged from 4 incidents per month to 27 incidents, and averaged 11.2 incidents per month. During May, the present Quiet Time and token program were implemented. An evaluation conducted by a psychiatric agency and medical staff found that the client was hypoglycemic and that this condition might account for some irritability and aggression. During the following month, new diets were prescribed and correlations of aggression with diet changes, urinary tract infections, and dental conditions were noted and evaluated. From June to October, 1980, incidents ranged from 7 to 18 and averaged 12.8 per month. Following the elimination of infections, the frequency of maladaptive behaviors reduced to zero for periods up to one to two weeks. During the period of November, 1980, to March, 1981, behavior episodes correlated with infections,

dental conditions, inconsistent diet and inconsistent taking of medication for itching and allergies. During this period, behavioral episodes ranged from 9 to 27 and averaged 17.8 incidents per month.

During April, 1981, the client changed school programs and dietary factors were stabilized. The home program continued evaluating reinforcers as a component of her token program which were compatible with medical treatment. During the period of April to August, 1981, episodes ranged from 2 to 23 and averaged 11.8 incidents per month. This data indicated a trend with August reflecting 2 incidents, the lowest frequency since data collection began in January of 1980.

During the following five months, September, 1981, to January, 1982, the decrease in intensity and frequency of unacceptable behavior continued. The number of incidents ranged from 1 to 8 and averaged 5.2 episodes per month, the lowest rate in two years. The trend of low behavior frequency continued during the next 5 month period of February to June of 1982, ranging from 5 to 8 incidents and averaging 6.4 episodes per month. During June of 1982, a dietary change which resulted from the hypoglycemic condition required that additional restrictions be placed on the types of food. During the next period of 4 months, two factors were observed which correlated with a slight increase in target behaviors. During the months of July and August, the client was readjusting to her diet and to a new client who arrived at the group home in July, 1982. Following the months of July and August, the client's behavior decreased during September and October. Total incidents for this four month period ranged from 0 to 13 and averaged 6.3 episodes per month.

Summary:

In the past year, the client has experienced absences of maladaptive behavioral episodes for periods of approximately 4 weeks at a time. The intensity of episodes has decreased to an average of 10 to 15 minutes per incident and her appearance and social interaction skills have improved. A basic token program remains in

force in which the client earns two stars each day when no maladaptive behaviors occur. The team has noted that changes in dietary program, obtaining food in an unacceptable manner, illness, and being teased or unacceptably treated by other clients will stimulate maladaptive behavior incidents and non-compliance. The preparedness program for this client involves current validation of effective reinforcers which can be utilized, monitoring her medical condition and diet. Nine incidents of self-injurious aggression were observed for a 10 month period in 1981 and only 3 incidents of self injurious aggression have been reported in the following 10 month period. During this treatment period, the I-Team considered options, such as anti-depressant and anti-psychotic medication, but was hesitant to institute a "new variable" until a thorough analysis was completed. The home manager is commended for her skill in directing staff to carry out medical and behavioral treatment observations. It is this type of commitment which assists the I-Team in deciding what would have constituted unnecessary treatment with behavior modifying medications.

Subject 3 is an adult female who functions adaptively and intellectually in the mild range of intelligence. Her case presents an excellent example of one in which the need for periodic administration of medications for the purpose of behavior control was systematically evaluated and justified over the past 2 and one half years. The I-Team, in the course of treatment, adjusted the behavior modification approach, obtained a second psychiatric opinion with respect to need for behavior medications, and evaluated maladaptive behavioral escalations with other medical illnesses and infections and menstrual cycle.

Annual reviews held in 1979 and 1980 suggested that the need for behavioral controlling medications be re-evaluated. This review was requested as a result of observations made for 6 months in 1980 (July to December) in which 17 intense maladaptive behavior episodes were observed. The maladaptive behaviors include: (1) aggression directed at self and property, and (2) unacceptable crying,

screaming and verbal behavior. Eleven of the incidents occurred during a period of illness while others appeared correlated with family contacts and routine requests to perform tasks. Since 1979, the client was taking Mellaril, the effects of which were not known. Attempts to have the psychotropic medication re-evaluated during the following months were not successful, despite the concern that maladaptive behaviors were escalating and the client might be responding to side effects. From January to June, 1981, maladaptive behaviors totaled 152 incidents, averaging 25.3 per month. In May, 1981, a second psychiatrist became involved and included the client's family in monthly evaluations. During June of 1981, Mellaril was discontinued and maladaptive behavior episodes appeared to correlate with menstrual cycle and ear infections. During the period of July to December, maladaptive behaviors totaled 48 and averaged 8 incidents per month. Mellaril was re-prescribed in August, gradually decreased and discontinued in December when Atarax was prescribed for approximately 30 days. A Quiet Time program implemented in June, 1981, continued unchanged except that attention directed at the client during episodes was minimized.

During the period of January to June of 1982, the client was medication free. During this period, 61 maladaptive behaviors occurred, averaging 10.2 per month. An increase in intensity and frequency occurred in June and Haldol and Cogentin were prescribed.

During the period of July to October, 1982, maladaptive behavior episodes were observed, averaging 2.5 incidents per month. During the period, Haldol and Cogentin were discontinued in August. Haldol was re-prescribed for 10 days in September and discontinued in October, 1982.

Summary:

A review of the improvement in the client's behavior suggests that the psychiatric approach which provided family support as well as support to the group home and client was one of the most important factors. The type of

support included (1) educating the family in methods of interacting with the client which did not depend on medications and ultimately would reduce dependence on medications, (2) systematically evaluating the effects of utilizing behavioral medications combined with behavior modification programs, and (3) evaluating medical conditions which contributed to target behavior escalations. Staff report that the client has improved over the past 2.5 years in that she is more alert and socializes more. Her appearance has improved and she continues to improve in her adaptive behavior skills in the area of self care and community living skills.

Subject 4 is a female who functions adaptively and intellectually in the mild/moderate range of intelligence. This case presents a second example in which the I-Team systematically evaluated the need for behavior controlling medications. The client's maladaptive behavior included (1) aggression directed at self and property, and (2) unacceptable screaming/yelling. A review of medical conditions which might stimulate or constitute a co-variable in increasing maladaptive behavior was not conclusive and uneventful over the past 2 and one half years. The I-Team noted that the client had a treatment history of over 20 years on various antipsychotic or behavioral medications. A review of maladaptive behaviors from June to December of 1980 indicated a total of 23 incidents averaging 3.3 per month.

In January of 1981, a Quiet Time program was implemented during which the client was encouraged to relax, as opposed to engaging in maladaptive behaviors. A motivational chart for self monitoring was implemented in which the client scheduled future activities and planned outings. The Team also requested that behavioral medications be reviewed and, in March, 1981, the Mellaril, 50 mg. per day, was reduced by one half. In the two month period prior to the reduction, only 5 incidents of maladaptive behavior were observed.

Following the medication reduction, the rate of maladaptive behavior averaged

3 episodes per month from March to May of 1981. In June, 1981, Mellaril was discontinued and previously specified maladaptive behaviors averaged 2.6 episodes per month from June to October, 1981. Another maladaptive behavior was observed in September of 1981. This behavior involved unacceptable verbalizations of talking for animals and about animals. Attempts to interrupt and modify this behavior with behavior modification approaches were not successful. The behavior continued to escalate and a behavior medication was reinstituted in November of 1981. A second psychiatric opinion to evaluate medications was obtained in December and, while other maladaptive behaviors averaged 0.4 per month from December, 1981, to July, 1982, the unacceptable verbal behavior continued until July, when substantial decreases were noted. During the period of behavioral medication evaluation, program variables were held constant.

In July of 1982, behavioral medications were discontinued and the client continues to maintain reduced rates of maladaptive behaviors, averaging 0.5 per month from August through October, 1982. Unacceptable verbalizations of talking for animals is observed occasionally.

Summary:

The client currently socializes with others and demonstrates an absence of maladaptive behaviors, which include (1) aggression directed at self, property, and (2) unacceptable screaming and yelling. The point which cannot be over-emphasized is the need for systematic analysis in the evaluation of treatment methods.

Subject 5 is a female who functions adaptively and intellectually in the mild range of intelligence. A review of the client's behavior since August, 1980, indicates that her adjustment to the group home has been progressing favorably. The treatment concerns of the I-Team with this client involved evaluating the need for continued treatment with Thorazine, a behavioral medication. Observations conducted from August, 1980, through January, 1981,

indicated that 5 episodes of maladaptive behavior were observed. The maladaptive behaviors observed included: (1) unacceptable screaming, yelling, crying. Another behavior which was observed was the client talking to herself or others when no one was present. A closer analysis of this verbal behavior found that the behavior was not "psychotic talk" but, instead, the client was thinking out loud and/or rehearsing what she was going to say or conversations she had participated in. In February, 1981, the Thorazine was discontinued and from February to June, 1981, only 4 episodes of maladaptive behavior were observed. Behavioral reviews conducted in June of 1981 and 1982 indicated that the client does not exhibit maladaptive behaviors which present problems.

Summary:

This case is another example of one in which the need for behavioral medication was evaluated by the I-Team. The I-Team, in this case, had to deal with the issue of "was the behavior of talking to ones self" psychotic behavior? As stated, following behavioral analysis, the team determined that the verbal behavior pattern was not psychosis or psychotic. At times, the I-Team fulfills an educational role for the treatment team and staff, as well as a treatment provider for the client.

Discussion - Subjects 1 through 5:

These subjects all resided in the same group home and the I-Team, in providing programs, had to consider social learning factors as well as motivational and medical factors during the process of behavior analysis. In some cases, the apparent influence of social learning, specifically imitation of maladaptive behavior and antagonistic interpersonal relationships, appeared to be a variable. In other cases, the I-Team found tht the apparent social learning variable was a component in a behavior chain which may have been stimulated by

a medical condition as well as psychological dependence on treatment, such as medication. The need for second psychiatric opinions occurred for two main reasons. The first reason was the need to locate a psychiatrist who would provide an individualized approach to the application of antipsychotic and/or behavioral medication. The individualized approach was more compatible with the systematic analysis of treatment methods and the justification for those methods being instituted. The second reason was the need for observers to evaluate current treatment methods as an independent, impartial consultant. This served as a reliability check and provided alternative treatment approaches which the Team may not have considered or have been aware of.

Conclusion

The purpose of this paper was to provide a general direction toward grounding the concept of prevention as applied to human behavior. The concept itself can not be realized at this time socially or scientifically and can only occur as a benefit from valid preparedness programs. The process of preparedness can be demonstrated as a function of longitudinal case studies and replications of programs which demonstrate significant degree of success (Antonelli and others, 1982 a, b; Antonelli and Olson, 1981; Antonelli, 1980; Congdon, 1974; Crosby, 1976; Zimmerman, E., Zimmerman, J., Russell, C., 1969; Storm, R. H., E. Willis, J. H., 1978; Favell, J. E., Favell, J. E., McGimsey, F. J., 1978; Jackson, G., and Antonelli, C., 1978; and Williams, P., 1967).

The author's position in this paper is more compatible with the second philosophical ground when the topic under consideration involves human behavior. The basis for this position is that a review of human learning literature over the past 100 years indicates that our expectations of human potential and ability to learn have changed with improvements in the technology of medicine and behavior analysis. The technology in terms of reinforcement has been available for thousands of years and the basic delivery systems remain constant. The one factor which has changed in analysis is that we have learned more precise methods at behavior observation. As our technology provides more precise observations, our expectations vary.

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